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09/987,758	11/15/2001	Luc Dartois	Q67075	7485

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EXAMINER
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DSOUZA, JOSEPH FRANCIS A

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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02/01/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/987,758

Applicant(s)

DARTOIS, LUC

Examiner

Adolf DSouza

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 9, 11 and 14 is/are allowed.
- 6) ☒ Claim(s) 6-7, 12 - 13 is/are rejected.
- 7) ☒ Claim(s) 8, 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1.. Applicant's arguments, see Remarks (page 2, last 2 paragraphs – page 3, 1<sup>st</sup> paragraph) filed 11/16/2007 with respect to claims 1 - 5, 11 have been fully considered and are persuasive. The 35 USC 112 and 35 USC 103(a) rejections of claims 1 and 11 have been withdrawn.

2. Applicant's arguments (see below) filed 11/16/2007 have been fully considered but they are not persuasive.

Argument: Applicant argued that Hellberg does not disclose a unit modulus operation (Remarks 11/16/2007, page 3, 2<sup>nd</sup> paragraph, line 3) and a an "opposite phase" (Remarks 11/16/2007, page 3, 2<sup>nd</sup> paragraph, line 4).

Response: Examiner respectfully disagrees. Hellberg discloses a unit modulus (column 10, line 26; where the phasor is shown to have unit modulus) and "an opposite phase" (column 12, lines 39 – 64, especially lines 60- 64 where Hellberg disclose "opposite" by using a negative frequency shift).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6, 7, 12, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hellberg (US Patent 6,324,559).

With regard to claim 6, Hellberg discloses a method of optimizing the performance of a mobile radio system transmitter using processing operations including discrete Fourier transform (DFT) computation, filtering in the frequency domain, and inverse discrete Fourier transform (IDFT) computation, wherein, before effecting said DFT computation, a frequency shift DF is applied in the time domain equal to the algebraic difference between the required central frequency of the corresponding filtered signal and the closest frequency sample coming from said DFT computation (col. 9, lines 5-62, col. 10, lines 55-67-col. 11, lines 1-67, col. 12, lines 1-13).

With regard to claim 7, Hellberg discloses a method of optimizing the performance of a mobile radio system transmitter using processing operations including discrete Fourier transform (DFT) computation, filtering in the frequency domain, and inverse discrete Fourier transform (IDFT) computation, wherein, before effecting said DFT computation, to compensate phase jumps between samples at the output of the IDFT, a complex multiplication is effected of the input samples by a complex of unit modulus and

opposite phase to the phase jump to be compensated (col. 10, lines 45-67 - col. 11, lines 1-52).

With regard to claim 12, see rejection of claim 6. Hellberg further discloses a mobile radio ration system transmitter (col. 1, lines 12-22, 38-50).

With regard to claim 13, see rejection of claim 7. Hellberg further discloses a mobile radio ration system transmitter (col. 1, lines 12-22, 38-50)

***Allowable Subject Matter***

5. Claims 8, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is statement of reasons for the indication of allowable subject matter:

The instant application discloses a method of optimizing the performance of a mobile ration system multicarrier transmitter. Prior art references show similar methods but fail to teach: "wherein, the input sampling frequency being equal to 3.84 MHz, the required value of the output sampling frequency being close to 80 MHz, and the required value of the frequency resolution being close to 81) kHz, LDFT is chosen to be equal to 45 and LIDFT is chosen to be equal to 1261)", as in claim 5; "wherein said blocks are rotated in

such a manner that the LDFT-L zeros are placed as close as possible to the center of the blocks, to within one sample if L is odd", as in claim 10.

6. Claims 1 – 5, 9, 11, 14 are allowed.

The following is statement of reasons for the indication of allowable subject matter:

- As indicated by the Applicant in Remarks (11/16/2007, page 3, 1<sup>st</sup> paragraph), the prior art fails to show that the sampling rate is selected equal to the modulation rate of 3.84MHZ
- The instant application discloses a method of optimizing the performance of a mobile ration system multicarrier transmitter. Prior art references show similar methods but fail to teach: "overlapping being obtained by adding LDFT - L zeros to blocks of L incident signal samples to obtain blocks of LDFT samples to be applied to a DFT of length LDFT, and wherein the LDFT samples of said blocks are rotated in such manner that the LDFT - L zeros are placed as close as possible to the a center of the blocks and the L signal samples are placed on either side of the LDFT - L zeros", as in claims 9 and 14.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolf DSouza whose telephone number is 571-272-1043. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



AD

Adolf DSouza  
Examiner  
Art Unit 2611

  
DAVID C. PAYNE  
SUPERVISORY PATENT EXAMINER